

An Evaluation of Persuasive Messaging Factors and Strategies on Attitude Change Toward J-Turn Intersections



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Public Study

Participants

- $N = 402$ (46% female) drivers from Minnesota
- Urban ($n = 112$), Suburban ($n = 146$) and Rural ($n = 144$)

Method



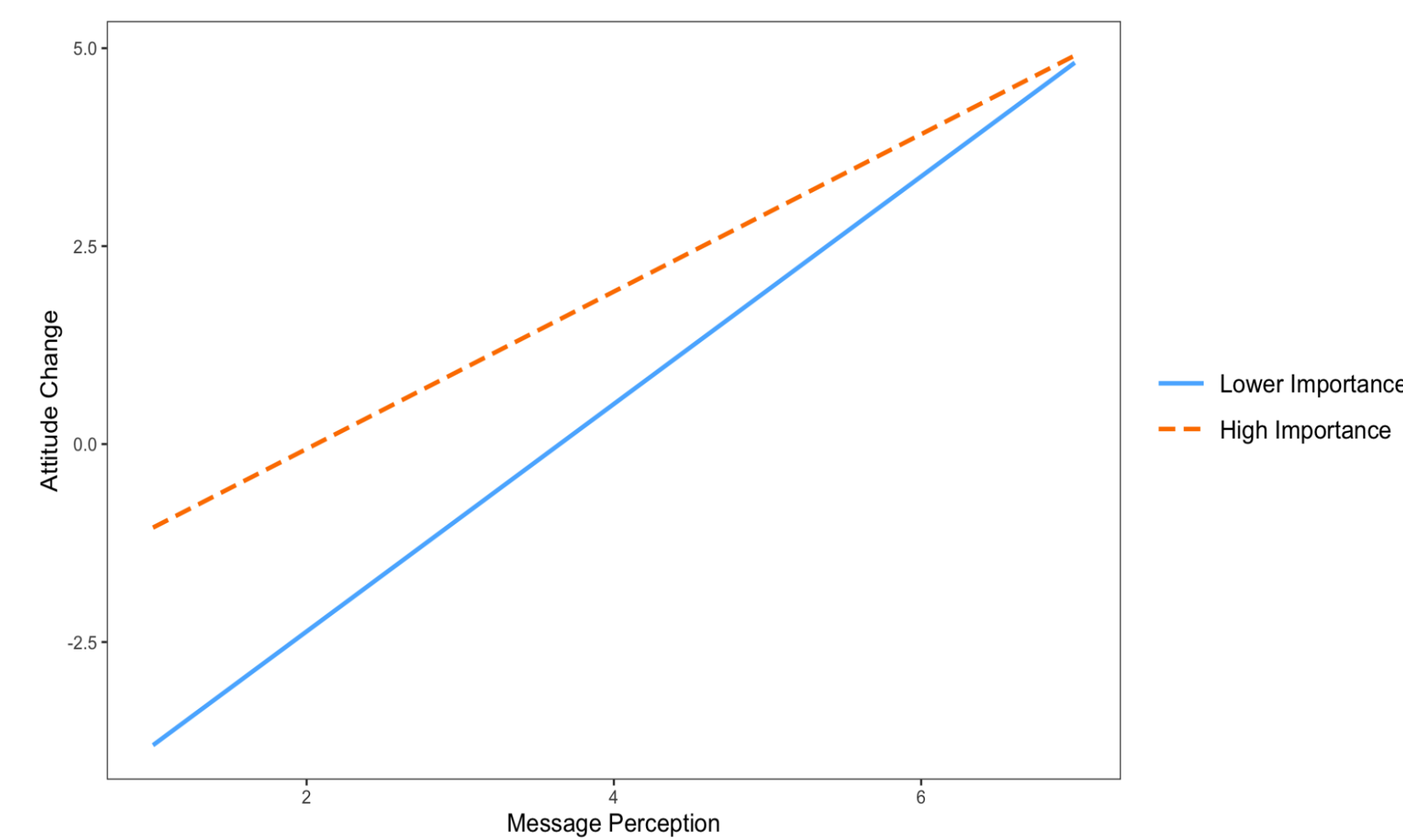
Results

J-turn attitudes improved after messaging

Pre-J-turn attitudes ($M = 14.45, SD = 4.16$) \rightarrow $t(401) = -19.60, p < .01$
Post-J-turn attitudes ($M = 17.76, SD = 3.73$) \rightarrow

Message quality perception interacted with safety importance

Those who placed high importance on safety perceived the message quality more positively, $t(396) = -3.84, p = .0001$.



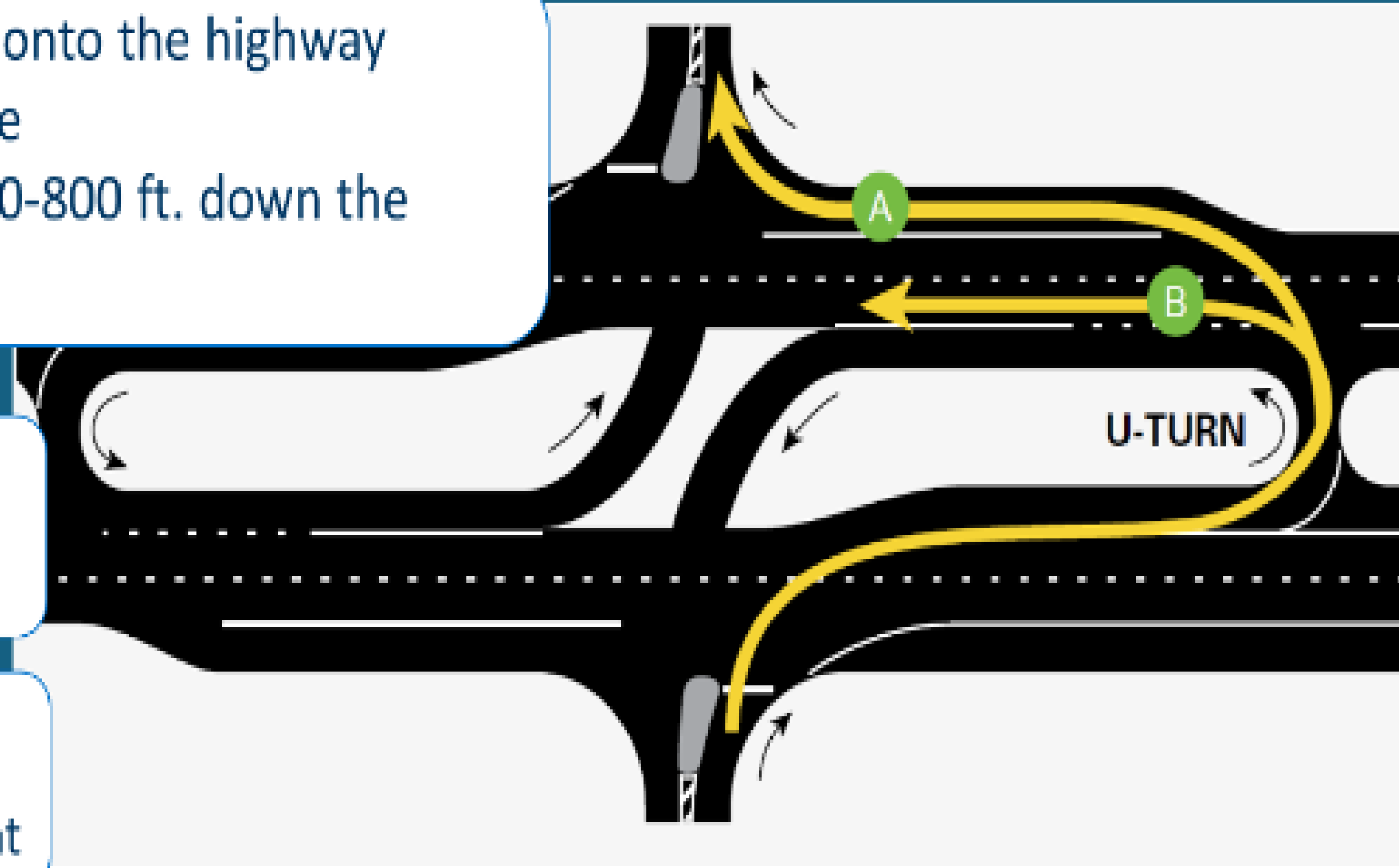
Presentation Modality, Location, and J-turn Attitude Change

- *Urban*. The PowerPoint produced the greatest attitude change ($emm = 4.03, SE = .61$)
- *Suburban*. Testimonials produced the greatest attitude change ($emm = 3.18, SE = .49$)
- *Rural*. The PowerPoint produced greatest attitude change ($emm = 4.03, SE = .61$)

Novel intersection designs are often met with resistance despite safety benefits

1. Make a right turn onto the highway
2. Enter the turn lane
3. Make a U-Turn 600-800 ft. down the road

- A Crossing Straight
4. Make a right
- B Turning Left
4. Continue straight



Outreach with brief messaging perceived as high-quality is an effective strategy for improving attitudes towards novel intersections

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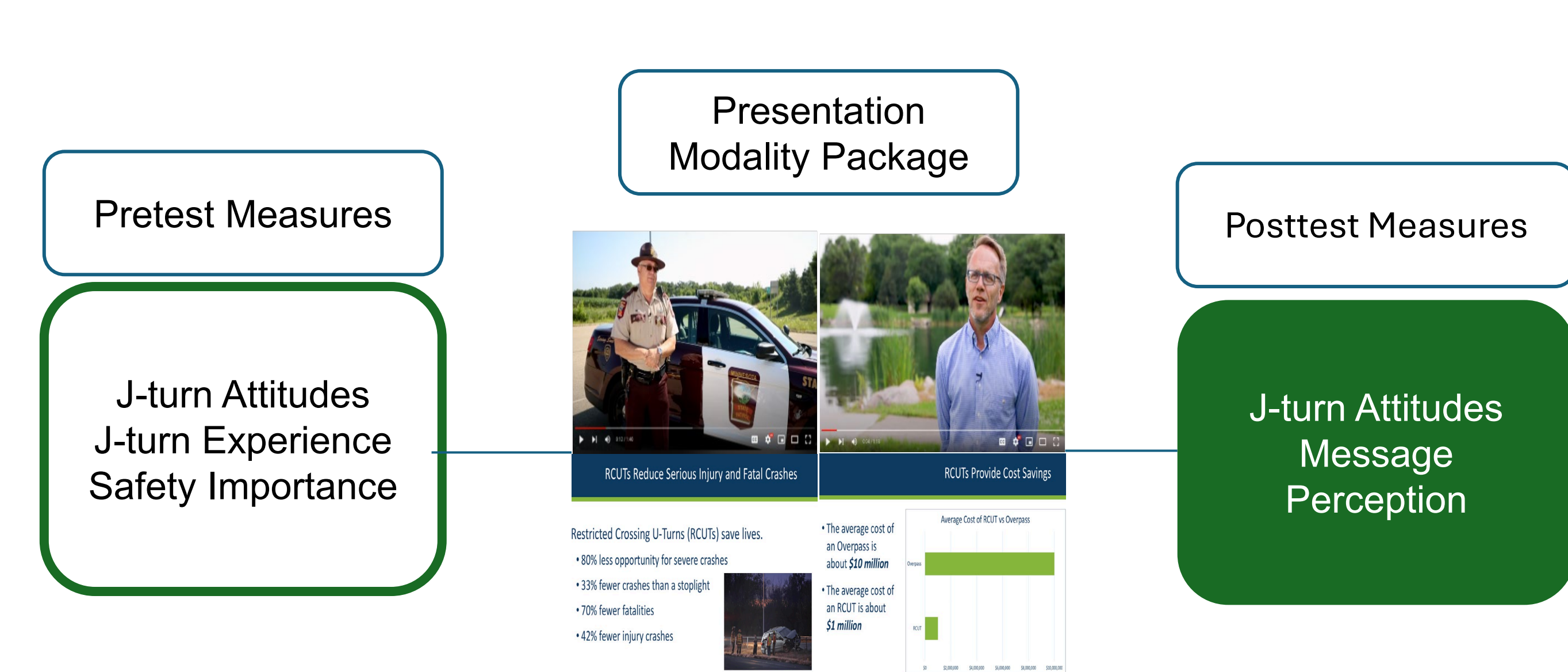


Local Leader Study

Participants

- $N = 24$ (25% female) local leaders from 7 MnDOT districts
- Urban ($n = 5$), Suburban ($n = 6$) and Rural ($n = 13$)

Method



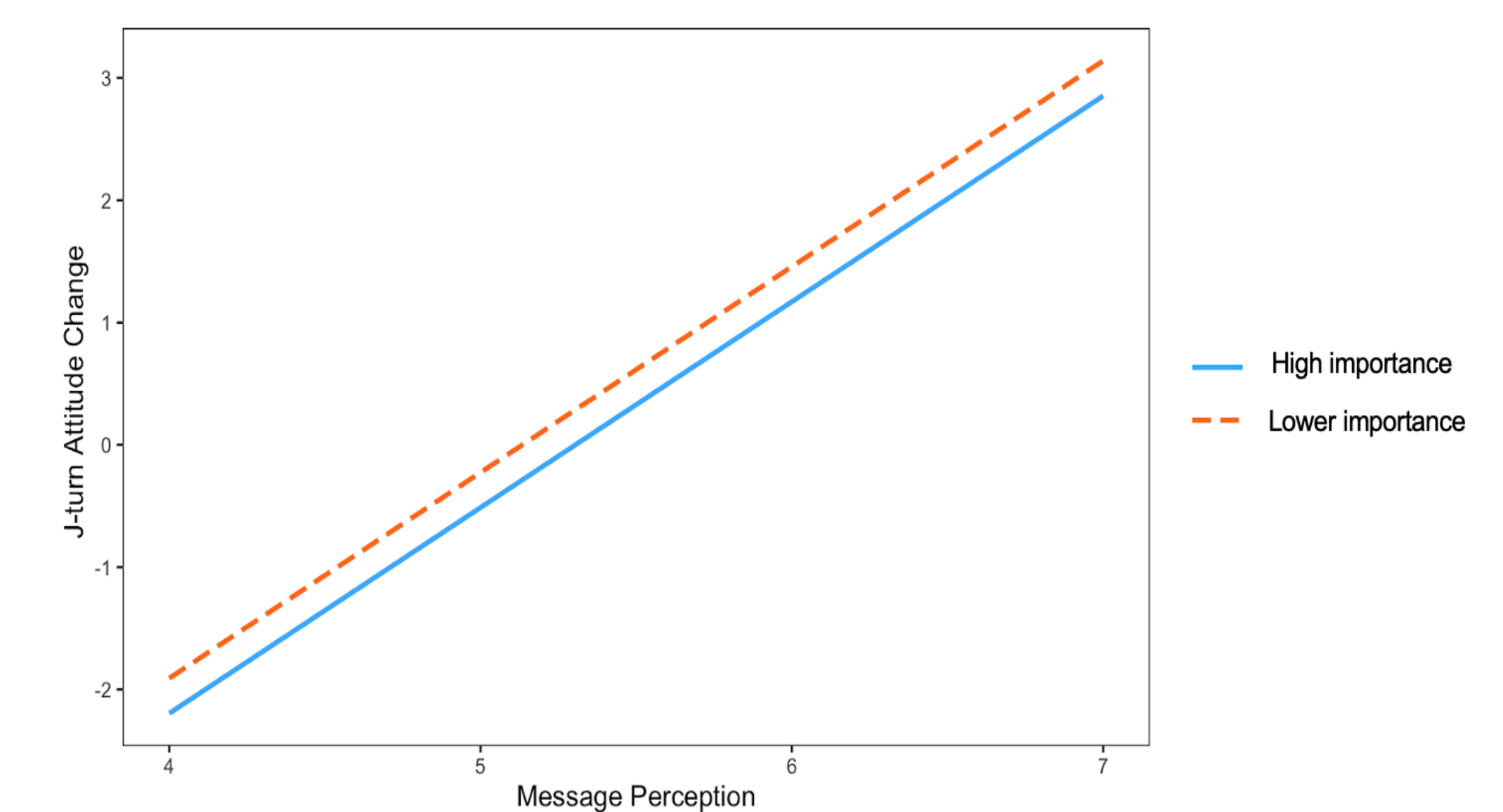
Results

J-turn attitudes improved after messaging

Pre-J-turn attitudes ($M = 16.13, SD = 4.74$) \rightarrow $t(23) = -2.84, p = .009$
Post-J-turn attitudes ($M = 17.33, SD = 4.03$) \rightarrow

Message quality perception affected J-turn attitudes

Messages with higher perceived quality resulted in greater J-turn attitude change, $B = 1.68 (SE = .52), p = .004$.



Geographic location affected attitudes on J-turns

Geographic location and "J-turns are a good idea", $F(2,20) = 4.82, p = .020$. Rural local leaders had more positive attitudes than suburban participants ($B = .90, SE = .17, p = .015$)